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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,887	03/30/2001	Michael P. Dallmeyer	2001P06108US	4450

7590 12/21/2010
SIEMENS CORPORATION
INTELLECTUAL PROPERTY DEPARTMENT
170 WOOD AVENUE SOUTH
ISELIN, NJ 08830

EXAMINER

WALTERS, RYAN J

ART UNIT	PAPER NUMBER
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3726

MAIL DATE	DELIVERY MODE
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12/21/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/820,887	Applicant(s) DALLMEYER ET AL.	
	Examiner RYAN J. WALTERS	Art Unit 3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/20/2008</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/19/2005 has been entered.

Specification

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

Claims 6-12 and 31-37 recite the limitation “a fuel tube assembly” and “a fuel tube”. However, these terms are not used in the specification.

Claims 7 and 32 recite the limitation “assembling the fuel tube assembly is performed exterior of the clean room”. However, the specification first does not mention the term “fuel tube assembly” and second explicitly states that the “valve group subassembly is required to be assembled in a clean room environment”.

Claims 12 and 37 recite “after installing the filter, inserting an armature into the fuel tube assembly”. However, page 9 shows the armature (step 9) is installed before the filter (step 17).

3. **The disclosure is objected to because of the following informalities:** The specification interchangeably uses the terms “valve group subassembly” and “fuel group subassembly” and uses the same reference characters for each. Are these both referring to the same thing?

Appropriate correction is required.

Claim Objections

4. **Claim 31** is objected to because of the following informalities: In line 2, delete the comma after tube in “a fuel tube, assembly”. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. **Claims 1-39 are rejected under 35 U.S.C. 112, first paragraph**, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1, 6 and 15 recite the limitation "the fuel group including having a generally constant outer diameter between a seat and an armature". This is considered to be new matter since this is not mentioned in the specification and it is not clear from the drawings what the outer diameter of the “fuel group” is and whether it has a constant diameter.

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7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. **Claims 1-39 are rejected under 35 U.S.C. 112, second paragraph**, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. **Claims 1, 6 and 15** recite the limitation "the fuel group including having a generally constant outer diameter between a seat and an armature". This limitation is unclear, how does a "group" have a constant outer diameter? Further, this is not mentioned in the specification and it is not clear from the drawings what the outer diameter of the "fuel group" is and whether it has a constant diameter.

10. **Claim 25** recites the limitation "the fixedly connecting". It is unclear which connecting step this is referring to.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. **Claims 1-8, 13-33 and 38-39 are rejected under 35 U.S.C. 102(e) as being anticipated by Dallmeyer (US 6,499,668).**

The applied reference has a common assignee and inventors with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

13. Re **Claim 1**, as best understood, Dallmeyer discloses a method of fabricating a fuel injector comprising: providing a clean room (Col. 10, lines 16-20); fabricating a fuel group 200 in the clean room (Col. 3, lines 5-18; Col. 10, lines 16-20), the fuel group 200 including having a generally constant outer diameter between a seat 250 and an armature 260 (Fig. 1-4); fabricating a power group 300 exterior of the clean room (Col. 10, lines 45-50); inserting the fuel group 200 into the power group 300 (Col. 7, lines 25-27; Col. 9, lines 55-57); and fixedly connecting the fuel group to the power group (Col. 7, lines 30-35; Col. 10, lines 1-7).

14. Re **Claim 6**, as best understood, Dallmeyer discloses a method of fabricating a fuel injector comprising: providing a clean room (Col. 10, lines 16-20); fabricating a fuel group 200 in the clean room (Col. 3, lines 5-18; Col. 10, lines 16-20), the fuel group 200 having a generally constant outer diameter between a seat 250 and an armature 260 (Fig. 1-4), and

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prior to fabricating the fuel group 200, assembling a fuel tube assembly, the fuel tube assembly including an inlet tube 210 and a non-magnetic shell 230 (Col. 3, lines 18-40);

fabricating a power group 300 exterior of the clean room (Col. 10, lines 45-50);

inserting the fuel group 200 into the power group 300 (Col. 7, lines 25-27; Col. 9, lines 55-57); and

fixedly connecting the fuel group to the power group (Col. 7, lines 30-35; Col. 10, lines 1-7).

15. Re **Claim 2**, Dallmeyer discloses prior to inserting the fuel group into the power group, performing at least one fuel flow tests on the fuel group (Col. 9, lines 24-25).

16. Re **Claim 3**, Dallmeyer discloses the at least one fuel flow tests are performed exterior of the clean room (Col. 10, lines 16-24).

17. Re **Claim 4**, Dallmeyer discloses the inserting is performed exterior of the clean room (Col. 10, lines 16-20).

18. Re **Claim 5**, Dallmeyer discloses the fixedly connecting is performed exterior of the clean room (Col. 10, lines 16-20).

19. Re **Claim 7**, Dallmeyer discloses assembling the fuel tube assembly is performed exterior of the clean room (Col. 10, lines 16-50).

20. Re **Claim 8**, Dallmeyer discloses after assembling the fuel tube assembly, performing a leak test on the fuel tube assembly (Col. 9, lines 24-25).

21. Re **Claim 13**, Dallmeyer discloses inserting the fuel group into the power group is performed exterior of the clean room (Col. 10, lines 16-20).

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22. Re **Claim 14**, Dallmeyer discloses the non-magnetic shell is inserted into the power group prior to the inlet tube (Col. 9, lines 55-67).

23. Re **Claim 18**, Dallmeyer discloses inserting the fuel group into the power group is performed exterior of the clean room (Col. 10, lines 16-20).

24. Re **Claim 19**, Dallmeyer discloses the fixedly connecting is performed exterior of the clean room (Col. 10, lines 16-20).

25. Re **Claim 20**, Dallmeyer discloses the fixedly connecting comprises welding the power group 300 to the fuel group 200 (Col. 7, lines 30-35; Col. 10, lines 1-7).

26. Re **Claim 21**, Dallmeyer discloses fabricating the power group comprises:

providing a magnetic housing 330;

providing an electro-magnetic solenoid coil 310; and

fixedly connecting the magnetic housing to the electro-magnetic solenoid coil (Fig. 3; Col. 6, lines 8-60).

27. Re **Claim 22**, Dallmeyer discloses fabricating the power group further comprises fixedly connecting at least one electrical terminal 320 to the electro- magnetic solenoid coil 310 (Col. 6, lines 20-26).

28. Re **Claim 23**, Dallmeyer discloses fabricating the power group further comprises forming a dielectric overmold 340 over at least part of the magnetic housing, the electro-magnetic solenoid coil, and the at least one electrical terminal (Col. 7, lines 1-6).

29. Re **Claim 24**, Dallmeyer discloses inserting the fuel group into the power group is performed exterior of the clean room (Col. 10, lines 16-20).

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30. Re **Claim 25**, Dallmeyer discloses the fixedly connecting is performed exterior of the clean room (Col. 10, lines 16-20).

31. Re **Claim 26**, Dallmeyer discloses the fixedly connecting comprises welding the power group 300 to the fuel group 200 (Col. 7, lines 30-35; Col. 10, lines 1-7).

32. Re **Claim 15**, as best understood, Dallmeyer discloses a method of fabricating a fuel injector comprising:

providing a clean room (Col. 10, lines 16-20);

fabricating a fuel group 200 in the clean room (Col. 3, lines 5-18; Col. 10, lines 16-20),

the fuel group 200 having a generally constant outer diameter between a seat 250 and an armature 260 (Fig. 1-4);

fabricating a power group 300 exterior of the clean room (Col. 10, lines 45-50),

the fabricating the power group 300 comprises:

providing a magnetic housing 330;

providing an electro-magnetic solenoid coil 310; and

fixedly connecting the magnetic housing to the electro-magnetic solenoid coil (Fig. 3; Col. 6, lines 8-60);

inserting the fuel group 200 into the power group 300 (Col. 7, lines 25-27; Col. 9, lines 55-57); and

fixedly connecting the fuel group to the power group (Col. 7, lines 30-35; Col. 10, lines 1-7).

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33. Re **Claim 16**, Dallmeyer discloses fabricating the power group further comprises fixedly connecting at least one electrical terminal 320 to the electro- magnetic solenoid coil 310 (Col. 6, lines 20-26).

34. Re **Claim 17**, Dallmeyer discloses fabricating the power group further comprises forming a dielectric overmold 340 over at least part of the magnetic housing, the electro- magnetic solenoid coil, and the at least one electrical terminal (Col. 7, lines 1-6).

35. Re **Claim 27**, Dallmeyer discloses prior to inserting the fuel group into the power group, performing at least one fuel flow tests on the fuel group (Col. 9, lines 24-25).

36. Re **Claim 28**, Dallmeyer discloses the at least one fuel flow tests are performed exterior of the clean room (Col. 10, lines 16-24).

37. Re **Claim 29**, Dallmeyer discloses the inserting is performed exterior of the clean room (Col. 10, lines 16-20).

38. Re **Claim 30**, Dallmeyer discloses the fixedly connecting is performed exterior of the clean room (Col. 10, lines 16-20).

39. Re **Claim 31**, Dallmeyer discloses prior to fabricating the fuel group 200, assembling a fuel tube assembly, the fuel tube assembly including an inlet tube 210 and a non-magnetic shell 230 (Col. 3, lines 18-40).

40. Re **Claim 32**, Dallmeyer discloses assembling the fuel tube assembly is performed exterior of the clean room (Col. 10, lines 16-20).

41. Re **Claim 33**, Dallmeyer discloses after assembling the fuel tube assembly, performing a leak test on the fuel tube assembly (Col. 9, lines 24-25).

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42. Re **Claim 38**, Dallmeyer discloses inserting the fuel group into the power group is performed exterior of the clean room (Col. 10, lines 16-20).

43. Re **Claim 39**, Dallmeyer discloses the non-magnetic shell is inserted into the power group prior to the inlet tube (Col. 9, lines 55-67).

Claim Rejections - 35 USC § 103

44. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

45. Claims 9-12 and 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dallmeyer (US 6,499,668) in view of Simandl (US 5,803,983).

46. Re **Claims 9 and 34**, Dallmeyer does not disclose, after performing the leak test, washing the fuel tube assembly.

However, **Simandl** teaches washing a fuel tube assembly (Col. 2, lines 25-50). It would be obvious to wash the fuel tube assembly, as taught by Simandl, for the purpose of reducing the potential for injector failure and to remove solid particulate material lodged within internal cavities (Col. 2, lines 25-30).

47. Re **Claims 10 and 35**, Dallmeyer discloses prior to washing the fuel tube assembly, placing the fuel tube assembly in the clean room (Col. 10, lines 15-19).

48. Re **Claims 11 and 36**, Dallmeyer discloses inserting a filter into the fuel tube assembly (Col. 5, lines 15-25).

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49. Re **Claims 12 and 37**, Dallmeyer discloses after installing the filter, inserting an armature into the fuel tube assembly (Col. 5, lines 17-48; Col. 9, lines 55-67).

Double Patenting

50. **Applicant is advised that should claim 4 be found allowable, claims 13 and 18 will be objected to** under 37 CFR 1.75 **as being a substantial duplicate thereof.**

When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

51. **Applicant is advised that should claim 29 be found allowable, claim 38 will be objected to** under 37 CFR 1.75 **as being a substantial duplicate thereof.** When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

52. **Applicant is advised that should claim 11 and 12 be found allowable, claims 36 and 37 will be objected to** under 37 CFR 1.75 **as being a substantial duplicate thereof.** When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Response to Arguments

53. Applicant's arguments with respect to claims 1-39 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RYAN J. WALTERS whose telephone number is (571)270-5429. The examiner can normally be reached on Monday-Friday, 9am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on 571-272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. J. W./
Examiner, Art Unit 3726

/DAVID P. BRYANT/
Supervisory Patent Examiner, Art Unit 3726